

## FREESTANDING ELECTRONIC PRESENTATION SYSTEM

### BACKGROUND OF THE INVENTION

Personal computers, especially portable personal computers, as well as other image projection and display equipment have greatly increased the ability of a presenter to communicate effectively and transfer large amounts of information in a face-to-face meeting. Portable personal computers typically have a flat display screen or monitor that is hinged to the computer base to provide a folding cover and close up the computer and screen in a protected book form.

A major problem facing the presenter in a small meeting setting, for example of two to about ten persons, is the ability to display the information to be presented in any location, without the need for expensive and specialized overhead projection equipment. For example, the "road warrior" needs to travel to the viewers' location under a flexible itinerary, and be able to make the presentation in any setting. Advance planning for the presentation may not be possible. Currently available presentations systems do not have this flexibility. For example, U.S. Pat. No. 5,041,965 describes a laptop computer with a detachable display that can be used as a transparency for an overhead projection system. Also, U.S. Pat. No. 4,846,694 describes a computer terminal having a projection module supported on an overhead projector with an LCD display mounted parallel to the illumination window of the overhead projector. Such overhead projection systems typically require advance planning and viewer equipment for the presentation.

A second problem for the presenter is to display information to the viewers while simultaneously viewing the information on a personal computer so that the distance between the viewers and presenter can be adjusted in an interactive meeting. The presenter then has the option to display all or a limited portion of the information to the viewers based on the interaction.

Various types of displays currently exist for the presenter. For example, U.S. Pat. No. 5,390,246 describes a hand-held monitor to be used by a viewer receiving a presentation which employs, for example, a Sharp 6M-40U LCD color monitor. The hand-held monitor is connected to a portable multimedia marketing system. The monitor and other components of the multimedia marketing system are contained in a specialized portable carrying case.

Various other displays have been designed for freestanding operation. For example, U.S. Pat. No. 6,050,535 describes a freestanding flat panel display that rotates on a stand. The stand has a circular recess to support the display and provide space for a ring-shaped rotation member and other components which rotatably attach the display to the stand. The stand has a bulky circular base to provide stable support for the display.

In another example, U.S. Pat. No. 5,793,606 describes a presentation system based on a modified portable personal computer with a detachable display formed with a hinge that allows the angle of the display to be adjusted. The detachable display does not allow simultaneous viewing from different locations or angles. Also, the presenter and the viewers must use the same display panel.

In another example, U.S. Pat. No. 5,856,819 describes a bi-directional presentation device for a modified laptop computer comprising attached front and rear display screens positioned so that their image surfaces face in opposite directions. The device can simultaneously display images to

viewers seated on opposite sides of the device. Front and rear protective covers may be hinged to the displays, which can be rotated downward through an angle of 90° to function as a stand. The presenter and the viewers must use the same dual display panel device in fixed proximity to each other.

In another example, U.S. Pat. No. 5,986,634 describes a display comprising a base unit that can be mounted to furniture or sit on top of a surface. The display is rotatably connected to the base unit, and can rotate about 90° from a closed position parallel to the base unit. The base unit comprises circuitry and a sensor for determining the orientation of the display in relation to the base to make adjustment of the image for proper viewing.

What is needed is a lightweight portable freestanding LCD display with a protective cover that can be pivoted to form a stand for the display, that is suitable for use with a personal computer, especially a portable personal computer, and can be used to make interactive presentations to a small group of viewers in any location.

### SUMMARY OF THE INVENTION

The limitations of current technology described above are overcome by this invention, which relates to an electronic presentation system that in one embodiment comprises a LCD display panel having a light-emitting face, LCD display panel operating circuitry, a power supply for the LCD display panel and operating circuitry, a housing for the LCD display panel and operating circuitry, and a cover stand which is hinged to the housing. The cover stand can be pivoted about the hinge from a first non-supporting position in which the cover stand is in an adjacent parallel plane to the light-emitting face of the LCD display panel to a second supporting position in which the cover stand supports the housing, in which the cover stand is pivoted through an angle ranging from greater than 0° to about 360°.

In another embodiment, the electronic presentation system further comprises a data input device and a cable connecting the data input device to the LCD display panel circuitry. The data input device may be, for example, a notebook personal computer, a hand-held personal computer, or a wireless device such as a cellular telephone.

In further embodiments, the hinge may be a piano hinge, a flexible hinge, or an o-ring hinge.

In further embodiments, the bottom edges of the housing and cover stand may be coated with non-slip trim material or comprise trim material.

In another embodiment, this invention is an electronic presentation system comprising a plurality of attached LCD display panels.

For a better understanding of this invention and its objects, reference is made to the following description to be considered in light of the complete application, and the scope of this invention as pointed out in the appended claims.

### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view of an embodiment of the freestanding electronic presentation system of this invention;

FIG. 2 is a diagram of an embodiment of the LCD display panel operating circuitry of this invention.

### DETAILED DESCRIPTION OF THE INVENTION

This invention is an electronic presentation system comprising a portable LCD display panel, such as a Thin Film